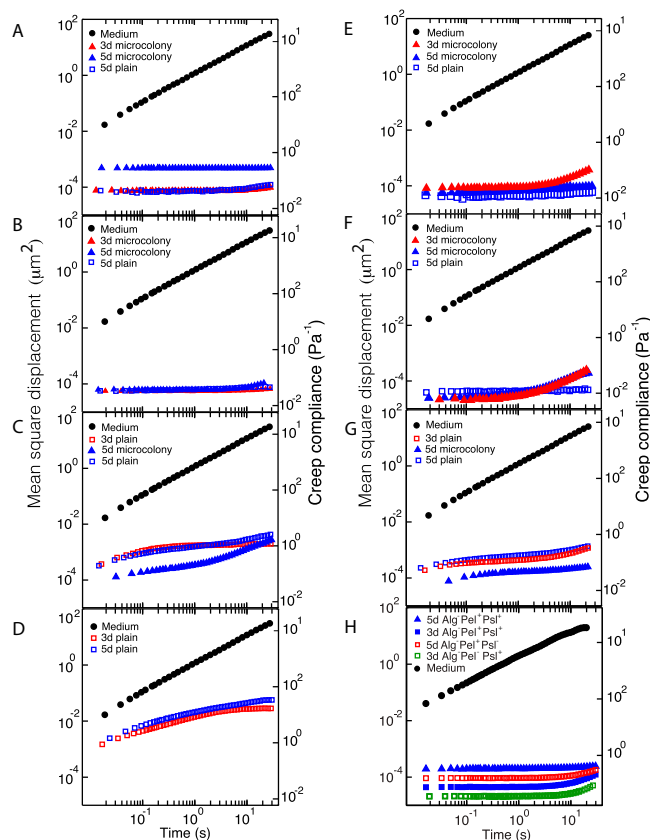


Erratum for “Dynamic Remodeling of Microbial Biofilms by Functionally Distinct Exopolysaccharides”

Su Chuen Chew,^{a,b} Binu Kundukad,^d Thomas Seviour,^b Johan R. C. van der Maarel,^{d,e} Liang Yang,^{b,c} Scott A. Rice,^{b,c,f} Patrick Doyle,^{d,g} Staffan Kjelleberg^{b,c,f}

Interdisciplinary Graduate School,^a Singapore Centre on Environmental Life Sciences Engineering,^b and School of Biological Sciences,^c Nanyang Technological University, Singapore; BioSystems and Micromechanics IRG, Singapore-MIT Alliance for Research and Technology,^d and Department of Physics,^e National University of Singapore, Singapore; Centre for Marine Bio-Innovation and School of Biotechnology and Biomolecular Science, University of New South Wales, Sydney, NSW, Australia^f; Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts, USA^g

Volume 5, no. 4, doi:10.1128/mBio.01536-14, 2014. We here correct Fig. 5 (PDF page 6) with revised scaling for the right y axis. There was erroneous scaling of the creep compliance axis of Fig. 5, which affected the conversion of MSD to creep compliance values. The biological outcomes and the conclusions remain unchanged.



Published 2 June 2015

Citation Chew SC, Kundukad B, Seviour T, van der Maarel JRC, Yang L, Rice SA, Doyle P, Kjelleberg S. 2015. Erratum for “Dynamic remodeling of microbial biofilms by functionally distinct exopolysaccharides.” *mBio* 6(3):e00688-15. doi:10.1128/mBio.00688-15.

Copyright © 2015 Chew et al. This is an open-access article distributed under the terms of the [Creative Commons Attribution-Noncommercial-ShareAlike 3.0 Unported license](https://creativecommons.org/licenses/by-nc-sa/4.0/), which permits unrestricted noncommercial use, distribution, and reproduction in any medium, provided the original author and source are credited.

Address correspondence to Staffan Kjelleberg, s.kjelleberg@unsw.edu.au.

FIG 5 The left panels (A to D) show MSDs (left axis) and creep compliances (right axis) of 1.0- μm particles in biofilms expressing the Alg⁺ Pel⁺ Psl⁺ strain (A), which is elastic and for which microcolonies are reduced in effective cross-linking from days 3 to 5, the Alg⁺ Pel⁻ Psl⁺ strain (B), which is elastic and does not change in rheology from days 3 to 5, and the Alg⁺ Pel⁺ Psl⁻ strain (C), which is viscoelastic and mainly consists of plains that do not change in rheology from days 3 to 5. (D) Biofilm is not formed in Alg⁺ Pel⁻ Psl⁻ cells, and particle diffusion appears to be confined by extracellular secretion from a thin layer of cells. The right panels (E to G) show MSDs and creep compliances of 0.5- μm particles in biofilms expressing the strains shown. (E) The Alg⁺ Pel⁺ Psl⁺ strain is elastic, and the diffusivity of particles increases at long time scales in 3-day microcolonies, indicating that the biofilm mesh size exceeds 0.5 μm . By day 5, mesh size reduces and rheology is similar to that in Alg⁺ Pel⁺ Psl⁻ microcolonies. (F) The Alg⁺ Pel⁻ Psl⁺ strain is elastic, and the diffusivity of particles increases at long time scales in 3- and 5-day microcolonies. The rheological properties of the microcolonies remain constant from days 3 to 5. (G) The Alg⁺ Pel⁺ Psl⁻ strain is viscoelastic and mainly consists of plains that do not change in rheology from days 3 to 5. The 0.5- μm particles are not retained by the Alg⁺ Pel⁻ Psl⁻ cell layer. The lower curves of 0.5- μm compared to 1.0- μm particles indicate that the smaller particles locate to regions of higher effective cross-linking. (H) MSDs of 1.0- μm particles in Alg⁻ Pel⁺ Pel⁺, Alg⁻ Pel⁻ Psl⁺, and Alg⁻ Pel⁺ Psl⁻ microcolonies.

We also correct the creep compliances in the text:

A value of $4.3 \times 10^{-2} \text{ Pa}^{-1}$ and not $4.3 \times 10^{-4} \text{ Pa}^{-1}$ (PDF page 4, column 2, line 6).

A value of $2.5 \times 10^{-1} \text{ Pa}^{-1}$ and not $2.8 \times 10^{-3} \text{ Pa}^{-1}$ (PDF page 4, column 2, line 10).

A value of $3.6 \times 10^{-2} \text{ Pa}^{-1}$ and not $3.6 \times 10^{-4} \text{ Pa}^{-1}$ (PDF page 5, column 1, line 6).

A value of $3.2 \times 10^{-2} \text{ Pa}^{-1}$ and not $3.2 \times 10^{-4} \text{ Pa}^{-1}$ (PDF page 5, column 1, line 7).

A value of 1.0 Pa^{-1} and not $1.1 \times 10^{-2} \text{ Pa}^{-1}$ (PDF page 5, column 1, line 19).

In the Materials and Methods section (PDF page 9), in the equation for MSD conversion to creep compliance, parameter a is particle radius, not diameter.

We also correct Fig. 6 (PDF page 7). Fig. 6D was mislabeled 6A, and Fig. 6A was mislabeled 6D.

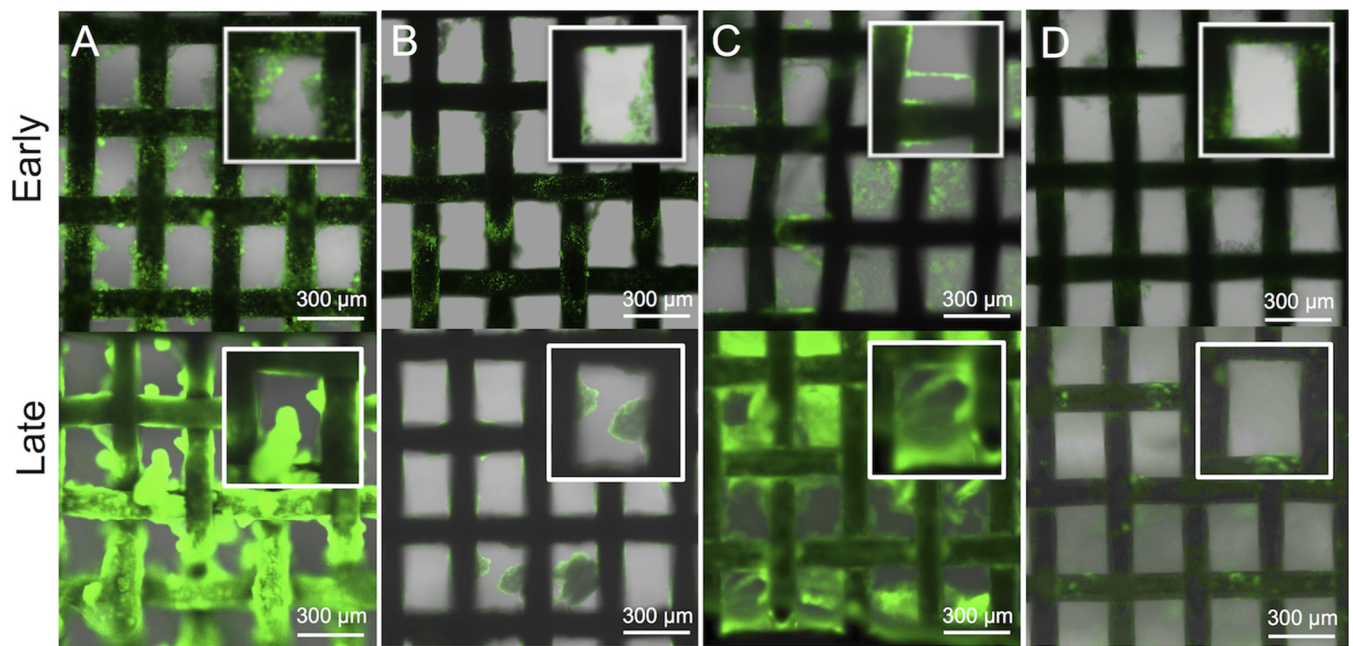


FIG 6 Confocal images of the various EPS mutants in the biofilm streamer cultivation system. Flow direction is horizontal (left to right) and parallel to the steel mesh. (A) Alg⁺ Pel⁺ Psl⁺ cells initially forming rough surface-attached biofilms that become smooth with enhanced spreading. (B) Alg⁺ Pel⁻ Psl⁺ cells forming rough surface-attached biofilms that develop large microcolonies with minimal spreading. (C) Alg⁺ Pel⁺ Psl⁻ cells forming smooth biofilms with extensive streamer formation that extends across the mesh. (D) Alg⁺ Pel⁻ Psl⁻ cells do not form biofilm. Insets show enlarged views of the biofilms.